REMARKS

Applicant cancels claims 2 and 6. Claims 1, 3-5, and 7-15 remain pending in the application. Applicant amends claims 1 and 5 to incorporate the respective features of canceled claims 2 and 6. Applicant amends claims 3, 7, and 9 to independent form, and amends claim 8 for proper dependency. No new matter has been added.

Claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,282,250 to Dent et al.; and claims 2, 4, 6 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dent et al. in view of U.S. Patent No. 6,321,094 to Hayashi et al. Again, Applicant amends claims 1 and 5 to incorporate the respective features of claims 2 and 6, and respectfully traverses the §103 rejection.

Dent et al. describe a method of carrying out an authentication check between a base station and a mobile station in a mobile radio system. In this mobile radio system, a base station carries out an authentication check of a mobile station who is a caller and establishes a speech connection of the call if the mobile station is authentic. Thereafter, during communication, the mobile station carries out an authentication check of the base station and continues the speech connection of the call. This authentication check is executed as follows.

The base station calculates Resp 2 signal using a random number RAND 2 and personal random number identification number PIN of the mobile station and sends this Resp 2 signal and the random number RAND 2 to the mobile station. The mobile station calculates Resp 2 signal using the random number RAND 2 and PIN of the mobile station, compares the calculated Resp 2 signal with the received Resp 2 signal, and regards the base station as authentic and continues the communication if they agree with each other, but ends the communication if the agreement is not detected.

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Unlike Dent et al., in the claimed invention, when a request signal requesting a prescribed operation execution is received from a base station, a mobile terminal executes authentication processing to check whether the request signal is a request signal from an authorized base station and executes an operation that is in accordance with the request signal only if authentication that the base station is an authorized base station is obtained.

Therefore, Dent et al. do not disclose,

> "...authentication processing means which, when a request signal requesting operation execution is received from a network device, is for executing authentication processing to check whether said request signal is a request signal from an authorized network device; and
> operation execution means for executing an operation that is in accordance with said request signal only if authentication that the network device is an authorized network device is obtained...,"
> as recited in claim 1. (Emphasis added)

Dent et al. also fail to disclose the corresponding features recited in claim 5.

Hayashi et al. describe a base station executing an authentication of a mobile station, and the base station establishing a connection to the mobile station if the mobile station is authentic. And Hayashi et al. describe in the second paragraph of the third column that a mobile station has a random number generator. But this random number generator is used to encrypt a predetermined part of the transmission data and to decrypt received data.

Unlike Hayashi et al., in the claimed invention, when a request signal requesting a prescribed operation execution is received from a base station, a mobile terminal executes authentication processing to check whether the request signal is a request signal from an authorized base station and executes an operation that is in accordance with the request signal only if authentication that the base station is an authorized base station is obtained.

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In addition, the random number generator of the claimed invention generates a random

number to execute an authentication operation. Hayashi et al. does not disclose a random

number generator for generating a random number which is used to execute an authentication

operation when a request signal requesting operation execution is received from the network

device.

As such, even assuming, arguendo, that it would have been obvious to one skilled in the

art to combine Dent et al. and Hayashi et al. at the time the claimed invention was made, the

combination would still have failed to disclose or suggest,

> "[a] mobile terminal in a mobile communication system for
> authenticating a communicating party when communication is
> performed between the mobile terminal and a device on the side of
> a network, comprising:
> authentication processing means which, when a request
> signal requesting operation execution is received from a network
> device, is for executing authentication processing to check whether
> said request signal is a request signal from an authorized network
> device; and
> operation execution means for executing an operation that
> is in accordance with said request signal only if authentication that
> the network device is an authorized network device is obtained,
> wherein said authentication processing means includes:
> means for storing an identifier and key information of a
> mobile terminal;
> a random-number generator for generating any random
> number when said request signal is received from the network
> device;
> an authentication operation unit for executing a prescribed
> authentication operation using said key information and random
> number;
> an authentication request signal transmitter for creating an
> authentication request signal, which includes said terminal
> identifier and random number, and sending this signal to the
> network device;
> a receiver for receiving an authentication result, which has
> been obtained by an authentication operation performed on the
> network side, from the network device; and

a comparator for comparing the authentication result computed by the mobile terminal and the authentication result sent from the network device; and

said operation execution means executes the operation that is in accordance with said request signal upon deciding that the network device is an authorized network device when the compared results agree," as recited in claim 1. (Emphasis added)

Accordingly, Applicant respectfully submits that claim 1 is patentable over Dent et al. and Hayashi et al., separately and in combination, for at least the foregoing reasons. Claims 4-5 incorporate features that correspond to those of claim 1 cited above, and are, therefore, together with claim 8 dependent from claim 5, patentable over the cited references for at least the same reasons.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dent et al. in view of U.S. Patent No. 5,737,701 to Rosenthal et al.; and claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dent et al. in view of U.S. Patent Application Publication No. 2002/0057678 to Jiang et al. Applicant respectfully traverses the rejections.

The Examiner relied upon Rosenthal et al. and Jiang et al. as combining references to specifically address the additional features recited in claims 3 and 7, respectively. As such, these references would have failed to cure the above-described deficiencies of Dent et al. even assuming, arguendo, that it would have been obvious to combine them. And since claims 3 and 7 incorporate features that correspond to those of claims 1 and 5 discussed above, they are patentable over the cited references for at least the above-stated reasons.

Furthermore, Rosenthal et al. describe an authentication system. When a wireless communication subscriber initiates a call without entering an authentication code, information associated with the call, such as the MIN/ESN of the subscriber's wireless telephone set, is used as search key to retrieve the override profile associated with that MIN/ESN. Using well-known

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data base search techniques, the called number entered by the subscriber is compared to the selected destination numbers stored in the subscriber's profile. If a match is found, the authentication code entry requirement is waived for the call, and call is processed in a conventional manner. If the called party number does not match any selected destination numbers in the profile, optionally, the caller is prompted to enter an authentication code. If the authentication code is invalid, optionally, a message indicative of service denial is delivered to the caller before the call is terminated. And Jiang et al. describe an authentication processing being refrained in a case where an authentication code is not included.

But, according to the claimed invention (claim 3), an authentication necessity table is provided in the mobile terminal and the mobile terminal judges, by reference to this table, whether a request signal received from the network device requires an authentication processing. This feature is not disclosed or suggested in Rosenthal et al. or Jiang et al. As such, claim 3 is patentable over the cited references for at least this additional reason.

Claims 9-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dent et al. in view of U.S. Patent Application Publication No. 2004/0087318 to Lipovski; claims 12, 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dent et al. in view of U.S. Patent Application Publication No. 2003/0122707 to Durst et al.; and claim 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dent et al. in view of U.S. Patent No. 5,915,225 to Mills.

The Examiner relied upon the Lipovski, Durst et al., and Mills as combining references to specifically address the additional features recited in claims 9-15, which incorporate features that correspond to those of claim 5 discussed above. As such, these references would have failed to cure the above-described deficiencies of Dent et al. even assuming, arguendo, that it would have

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been obvious to combine them. Accordingly, Applicant respectfully submits that claim 9,

together with claims 10-15 dependent therefrom, is patentable over the cited references for at
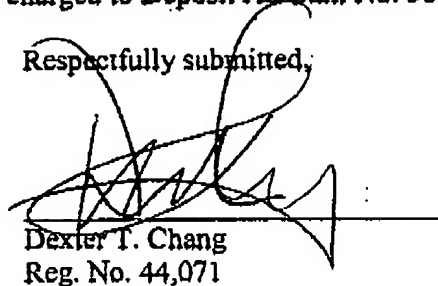
least the above-stated reasons.

The above statements on the disclosure in the cited references represent the present

opinions of the undersigned attorney. The Examiner is respectfully requested to specifically

indicate those portions of the respective reference that provide the basis for a view contrary to

any of the above-stated opinions.

Applicant appreciates the Examiner's implicit finding that the additional references made

of record, but not applied, do not render the claims of the present application unpatentable,

whether these references are considered alone or in combination with others.

In view of the remarks set forth above, this application is in condition for allowance

which action is respectfully requested. However, if for any reason the Examiner should consider

this application not to be in condition for allowance, the Examiner is respectfully requested to

telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

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